



(2 of 2)

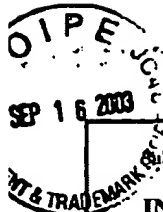
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		RECEIVED	
		Application Number	09/912,434
		Filing Date	July 24, 2001
		First Named Inventor	Donald Nelson
		Group Art Unit	2672
Examiner Name	Chante E. Harrison	Technology Center 2600	
Attorney Docket Number	IMMR058/00US		
Sheet	1	of	2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
Chante E. Harrison		6,104,379		Petrich et al.	08-2000
		5,563,632		Roberts	- 10-1996
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¹ Unique citation designation number.² See attached Kinds of U.S. Patent Documents.

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Application Number 09/912,434
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

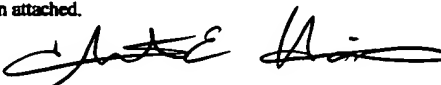
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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CU	C1	Balgrie, "Electric Control Loading - A Low Cost, High Performance Alternative," <i>Proceedings of Interservice/Industry Training Systems Conference</i> , pp. 247-254, November 6-8, 1990	
CU	C2	Iwata, "Pen-based Haptic Virtual Environment," 0-7803-1363-1/93 IEEE, pp. 287-292, 1993	
CU	C3	Russo, "The Design and Implementation of a Three Degree of Freedom Force Output Joystick," <i>MIT Libraries Archives</i> pp. 1-131, May 1990, archived 8/14/90	
CU	C4	Brooks et al., "Hand Controllers for Teleoperation - A State-of-the-Art Technology Survey and Evaluation," <i>JPL Publication 85-11</i> , NASA-CR-175890; N85-28559, pp. 1-84, 03/1/1985	
CU	C5	Jones et al., "A perceptual analysis of stiffness," ISSN 0014-4819 Springer International (Springer-Verlag); <i>Experimental Brain Research</i> , Vol. 79, No. 1, pp. 150-156, 1990	
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¹ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3).² For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.³ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible.⁴ Applicant is to place a check mark here if English language Translation is attached.



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Sheet	3	of	3	Application Number	09/912,434
				Filing Date	July 24, 2001
				First Named Inventor	Donald Nelson
				Group Art Unit	2672
				Examiner Name	Chante E. Harrison
				Attorney Docket Number	IMMR058/00US

<input checked="" type="checkbox"/>	C17	Adelstein, "A Virtual Environment System For The Study of Human Arm Tremor," <i>Ph.D. Dissertation</i> , Dept. of Mechanical Engineering, MIT, June 1989, archived 3/13/90	
<input checked="" type="checkbox"/>	C18	Bejczy, "Sensors, Controls, and Man-Machine Interface for Advanced Teleoperation," <i>Science</i> , Vol. 208, No. 4450, pp. 1327-1335, 1980	
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<input checked="" type="checkbox"/>	C20	McAfee et al., "Teleoperator Subsystem/Telerobot Demonstrator: Force Reflecting Hand Controller Equipment Manual," <i>JPL</i> 1988, JPL D-5172	
<input checked="" type="checkbox"/>	C21	Minsky, "Computational Haptics: The Sandpaper System for Synthesizing Texture for a Force-Feedback Display," <i>Ph.D. Dissertation</i> , MIT, June 1995, archived 7/6/95	
<input checked="" type="checkbox"/>	C22	Jacobsen et al., "High Performance, Dexterous Telerobotic Manipulator With Force Reflection," <i>Intervention/ROV '91 Conference & Exposition</i> , Hollywood, Florida, May 21-23, 1991	
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<input checked="" type="checkbox"/>	C25	Terry et al., "Tactile Feedback In A Computer Mouse," <i>Proceedings of Fourteenth Annual Northeast Bioengineering Conference</i> , University of New Hampshire, March 10-11, 1988	
<input checked="" type="checkbox"/>	C26	Howe, "A Force-Reflecting Teleoperated Hand System for the Study of Tactile Sensing in Precision Manipulation," <i>Proceedings of the 1992 IEEE International Conference on Robotics and Automation</i> , Nice, France, May 1992	
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<input checked="" type="checkbox"/>	C28	Rabinowitz et al., "Multidimensional tactile displays: Identification of vibratory intensity, frequency, and contractor area," <i>Journal of The Acoustical Society of America</i> , Vol. 82, No. 4, October 1987	
<input checked="" type="checkbox"/>	C29	Bejczy et al., "Kinesthetic Coupling Between Operator and Remote Manipulator," <i>International Computer Technology Conference, The American Society of Mechanical Engineers</i> , San Francisco, CA, August 12-15, 1980	
<input checked="" type="checkbox"/>	C30	Bejczy et al., "A Laboratory Breadboard System For Dual-Arm Teleoperation," <i>SOAR '89 Workshop</i> , JSC, Houston, TX, July 25-27, 1989	
<input checked="" type="checkbox"/>	C31	Oubyoung et al., "A Low-Cost Force Feedback Joystick and Its Use in PC Video Games," <i>IEEE Transactions on Consumer Electronics</i> , Vol. 41, No. 3, August 1995	
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<input checked="" type="checkbox"/>	C35	"Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

Complete If Known

Application Number 09/912,434
Filing Date July 24, 2001
First Named Inventor Donald Nelson
Art Unit 2672
Examiner Name Chante E. Harrison
Attorney Docket Number IMMR-058/00US

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U.S. PATENT DOCUMENTS					
Examiner	Cite No. ¹	Document Number Number (Kind Code) ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
CA		8,422,941	7/23/2002	Thomer et al.	
CA		8,160,489	12/12/2000	Perry et al.	
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		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		JP	H2-185278		7/19/1980	Taito Corporation	
		JP	H4-6381		1/13/1992	Epoch Co. and Key- Planning Co.	
		JP	H7-24147		1/27/1995	Sega Corporation	
		JP	H5-192449		8/3/1993	Taito Corporation	

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		NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 issue.	
		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.	
		ZILLES, "A Constraint-Based God-Object Method for Haptic Display," Department of Mechanical Engineering, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, undated.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 3

Application Number 09/912,434
Filing Date July 24, 2001
First Named Inventor Donald NELSON
Group Art Unit Unassigned
Examiner Name Unassigned
Attorney Docket Number IMMR-058/00US

PTO/SB/08A (08-00)

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Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
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		Office ³	Number ⁴	Kind Code ⁵ (if known)			
	B1		0-349-886	A1	Stork Kwant B.V.	01/03/1990	

¹ Unique citation designation number.

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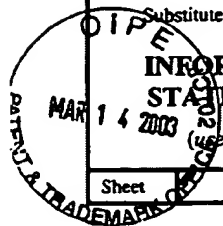
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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

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Sheet 2 of 3

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Application Number	09/912,434
Filing Date	July 24, 2001
First Named Inventor	Donald NELSON
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	IMMR-058/00US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
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	G2	Iwata, "Pen-based Haptic Virtual Environment," 0-7803-1363-1/93 IEEE, pp. 287-292, 1993	
	C3	Russo, "The Design and Implementation of a Three Degree of Freedom Force Output Joystick," <i>MIT Libraries Archives</i> pp. 1-131, May 1990, archived 8/4/90	
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Sheet 3 of 3

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Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	IMMR-058/00US

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